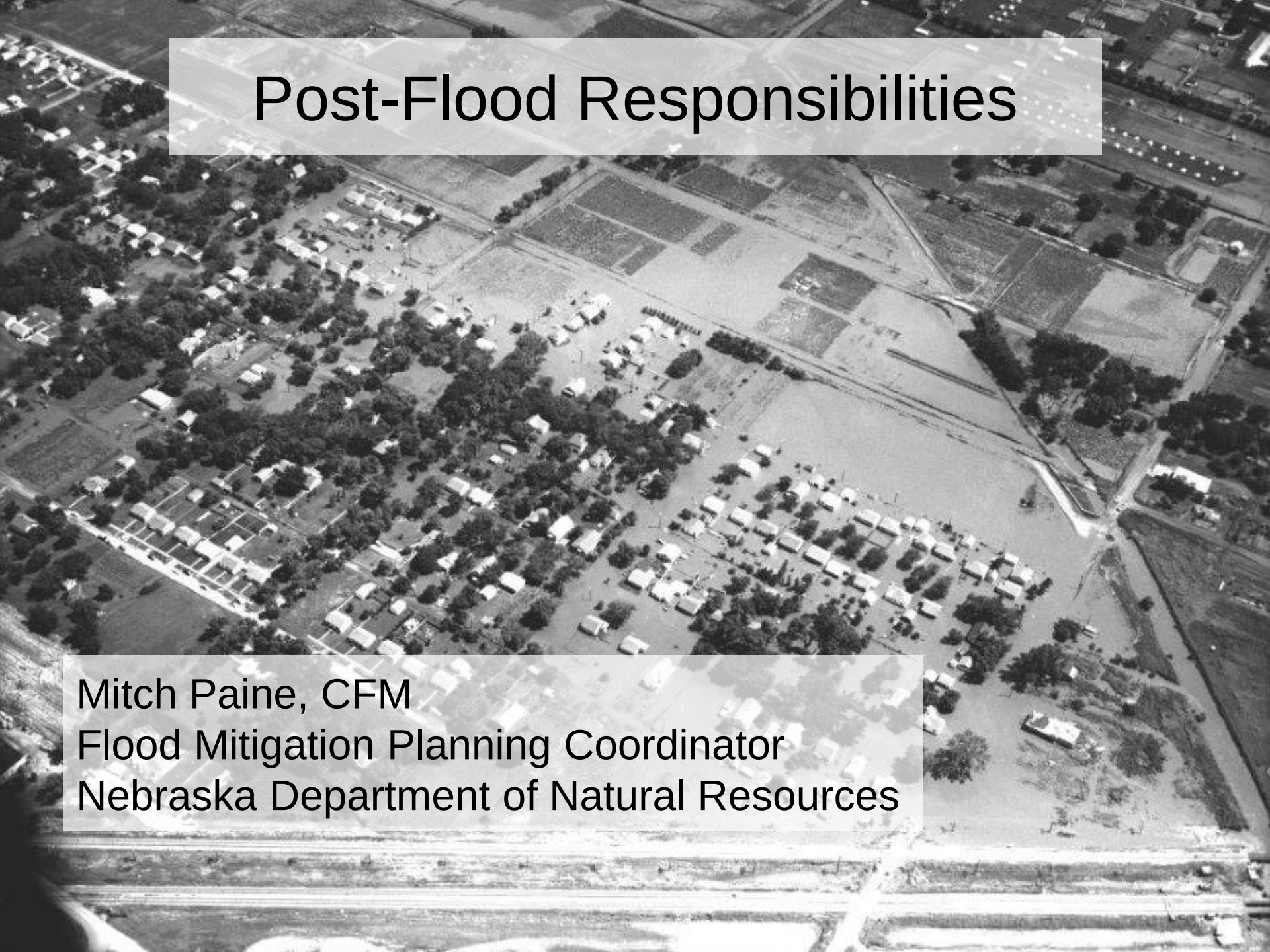
Post-Flood Responsibilities



Mitch Paine, CFM
Flood Mitigation Planning Coordinator
Nebraska Department of Natural Resources

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NEBRASKA'S WATER MANAGEMENT RESOURCE

Providing the sound science and support for managing Nebraska's most precious resource.

Local Responsibility

- Overall the community is responsible for a resilient recovery
- That happens before, during, and after any event:
  - 5 houses
  - 5 businesses
  - Entire community

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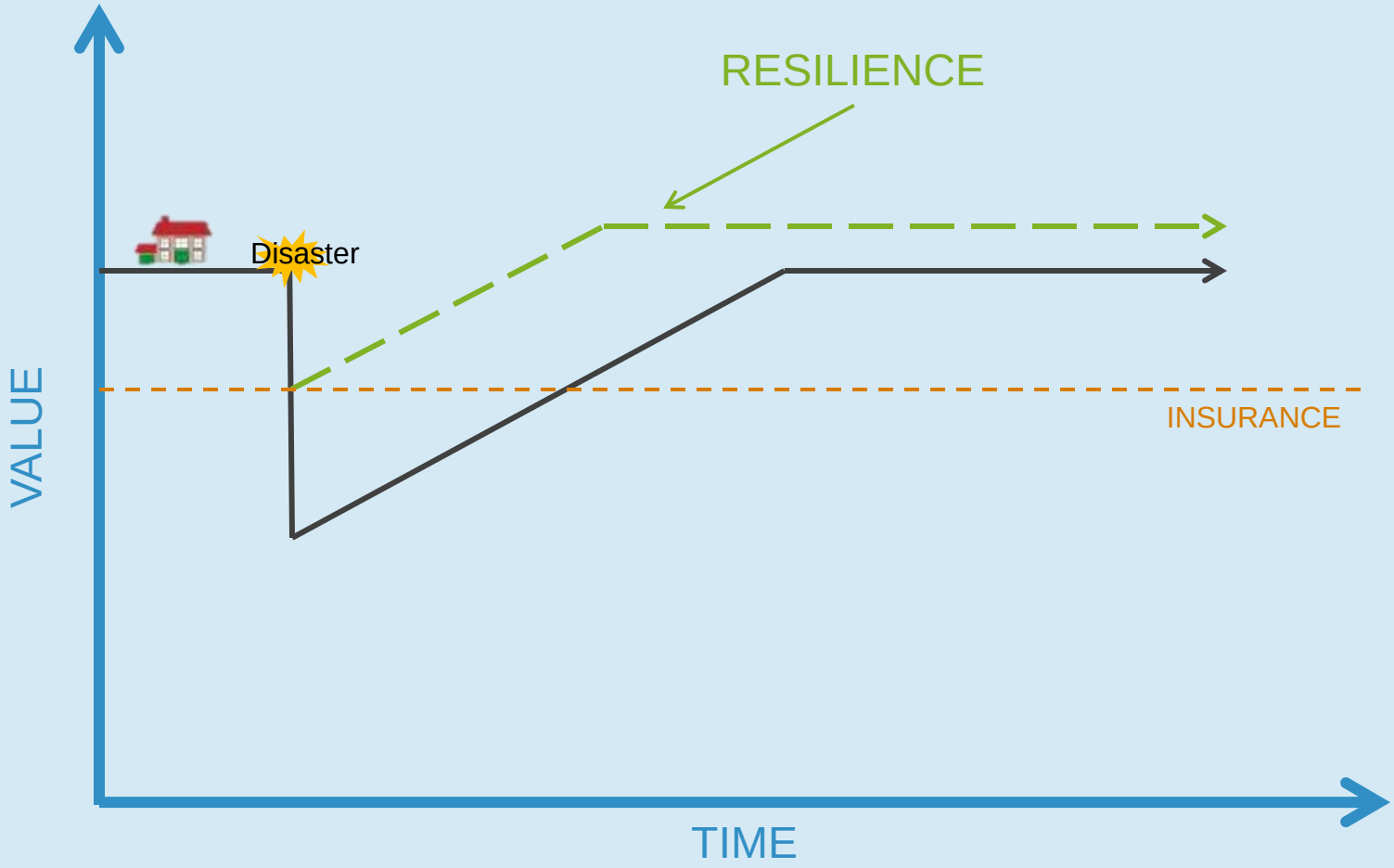
What is a “resilient recovery?”



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What is a “resilient recovery?”

- Ensuring a homeowner/business owner falls less far
- Encouraging community to grow back stronger
- Facilitating community to recover faster
- Planning for the next disaster

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Post-Flood Local Responsibilities

- Substantial damage and permitting
- Pre-disaster preparation
- Post-disaster planning

Photo: Missouri River flooding 2011

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Substantial Damage and Permitting

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What is substantial damage?

- Substantial damage = substantial improvement
- From City of Nebraska City:
  - "419.05.01 *Permit required.* No person, firm or corporation shall initiate any floodplain development or substantial improvement or cause the same to be done without first obtaining a separate permit for development…"
  - "419.08.2 *Standards for the flood fringe overlay district.* Require new construction or substantial improvement of residential structures to have the lowest floor, including basement, elevated to or above one (1) foot above the base flood elevation."
  - "419.15 *Definitions.*
    - 30. *Substantial improvement* means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure before "start of construction" of the improvement. This includes structures which have incurred 'substantial damage,' regardless of the actual repair work performed."

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Permits

- Local permits are required for **any** rebuilding in the floodplain – no matter what type of damage
- Often connected with:
  - Building permits
  - Zoning permits
- Be careful about expediting these!
- Other permits may be required

Notify Public of the Need for Permit

- Public notification (before, during, & after event)
  - Public meetings
  - Newspapers
  - Radio
  - Media interviews
- Structure-specific notification (just after event)
  - Tags – color coded depending on damage
  - Notification letters to individual properties
  - Door hangers/mailings

Property Tag

Department

What is substantial damage?

- "419.15 *Definitions*
  - 29. *Substantial damage* means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred."
- Key terms:
  - Of any origin – fire, flood, tornado, dilapidation
  - 50% - key is making that calculation
  - Cost of restoring – what can be counted toward that cost
  - Market value before damage – how do we determine that

Of any origin - Plattsmouth Fire, 2014

Of any origin – Missouri Flooding, 2011

Of any origin – Pilger tornado, 2014

50% Rule

$$\frac{\text{Cost to repair damage}}{\text{Market value}} \geq 50\%$$

EXAMPLE: A home is worth $110,000 before the flood and will cost $70,000 to bring to pre-damage condition.

$70,000 / $110,000 = 0.64 Multiple by 100, equals 64%

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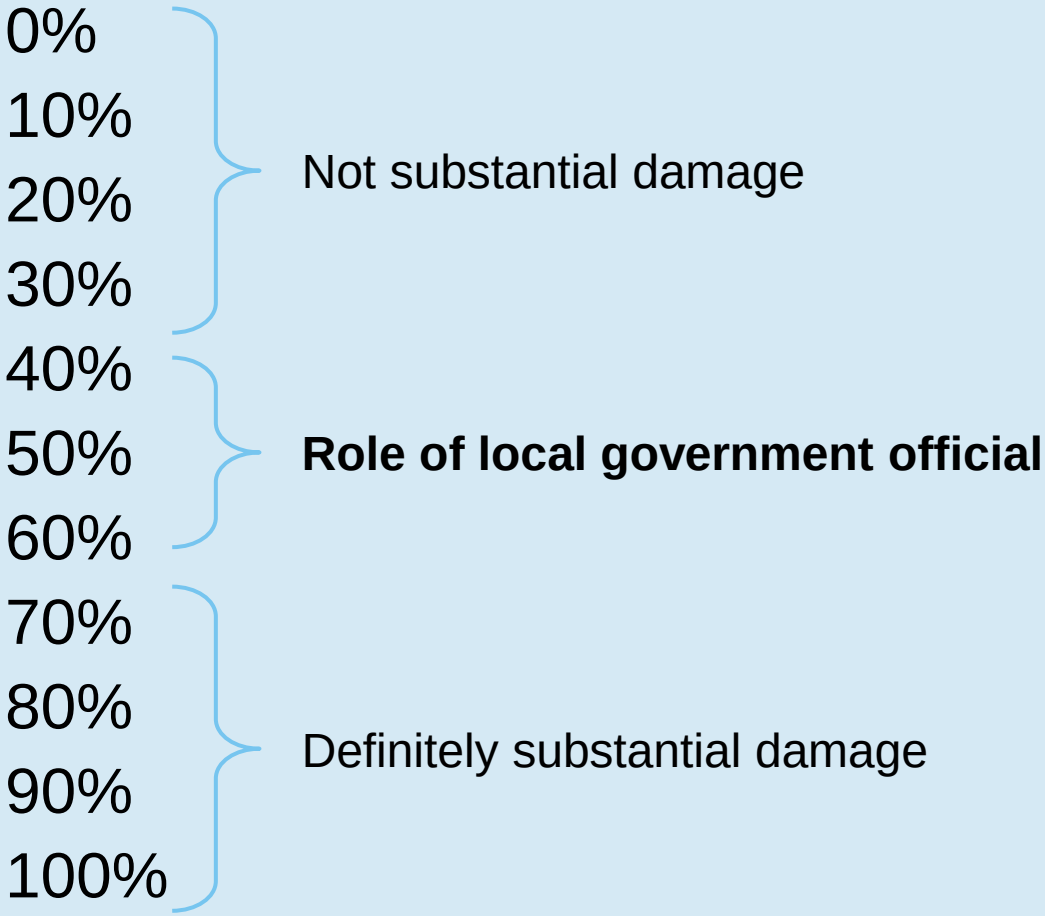
You are trying to determine substantial damage



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DAMAGE ASSESSMENT SURVEY GUIDELINES FOR DETERMINING DAMAGE LEVELS

Damage Levels	Conditions Present in Residential or Business Assessment
100%	Structure cannot be repaired Structure leveled *Four feet of water or more on the first floor in a single-family dwelling or apartment* *Six inches of water or more in a mobile home*
90%	Structure leveled above foundation Second floor gone
80%	Structure moved off foundation Walls collapsed
70%	Exterior frame damaged Roof gone or collapsed Outbuildings damaged *Two to four feet of water on the first floor in a single-family dwelling or apartment* *Water above or just below bottom board of mobile home*
60%	Foundation damaged Insulation damaged Exterior wall damaged Equipment damaged *18 inches to 24 inches of water on the first floor in a single-family dwelling or apartment*
50%	One room destroyed Exits blocked Utilities damaged *12 inches to 18 inches of water on the first floor in a single-family dwelling or apartment*
40%	Interior floors and walls damaged Minor damage to exterior walls Business inventory destroyed Trees fallen on structure *Less than twelve inches of water on the first floor in a single-family dwelling or apartment*
30%	Smoke damage Fire escape not usable Shingles or roofing missing Fleet/vehicle damage *Several feet of water in the basement* *Less than six inches of water on the first floor in a single-family dwelling or apartment* *Sewer backup*
20%	Chimney damage Porch or deck damaged Parking lot damaged *One to two inches of water on first floor or slab (no basement)*
10%	Broken windows Business signs damaged Damage to landscape Vehicle damage *Seepage* *Water in basement*

Develop structure list

- As you tour the affected areas, develop a list of:
  - Not substantially damaged (0% - 39%)
  - Possibly substantially damaged (40% - 60%)
  - Definitely substantially damaged (61% - 100%)
- Outside may not show everything in post-flood, so if you can't tell from the outside, put it in your "possible" list
- Need to do outreach with each group
  - Not SD – letter informing on permit requirement, but no substantial improvement requirement
  - Possible SD – letter/tag saying no work can be done until substantial damage can be estimated
  - Definite SD – letter/tag saying rebuilding must be to current floodplain standards, requirement to obtain permit

Not substantially damaged

Photo: Pilger tornado 2014

Definitely substantially damaged

Photo: Missouri River Flooding 2011


40 – 60% damaged, need more info
Photo: DeWitt Flooding 2015

Conducting field assessments

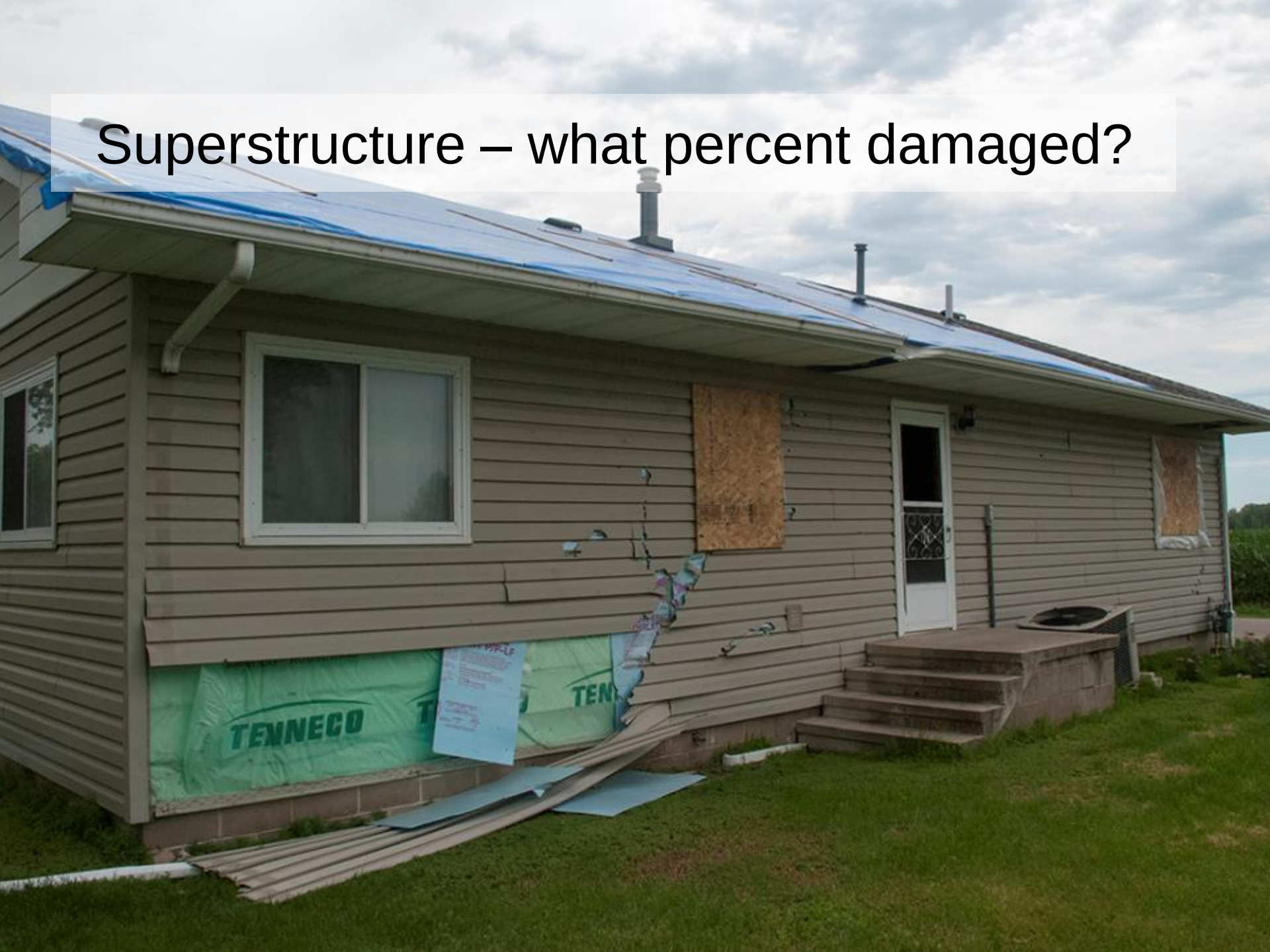
- Simply looking at damages – estimates of damage will go into cost calculations
- Take photographs
- Keep documentation for each property
- Obtain permission to enter building, walk around with property owner if possible
- Multiple staff members for field work
- Safety gear as needed

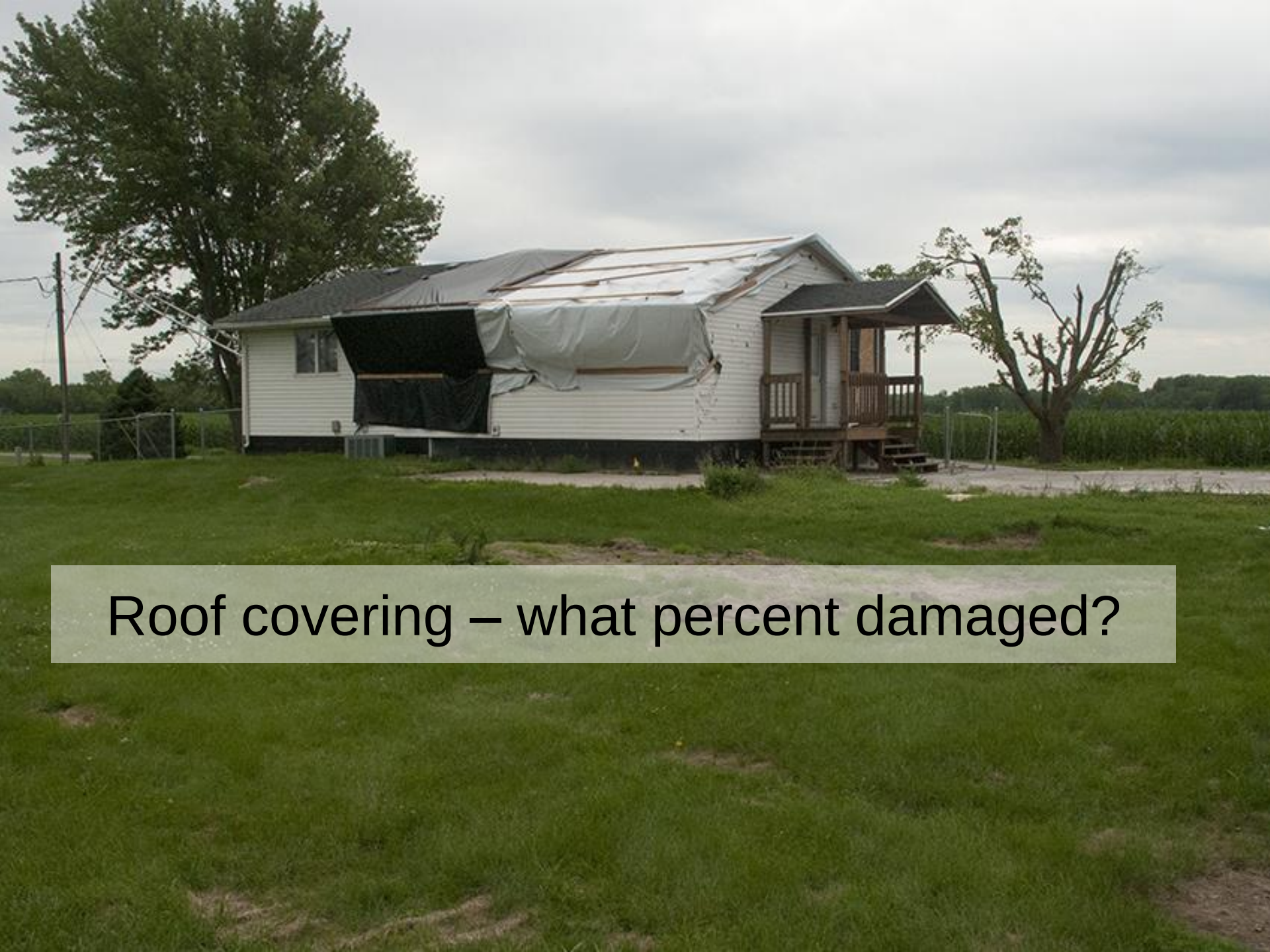
Estimate percent damaged

Element	% Damaged
Foundation	100%
Superstructure	30%
Roof covering	0%
Exterior finish	30%
Interior finish	0%
Doors and windows	50%
Cabinets and countertops	0%
Floor finish	0%
Plumbing	50%
Electrical	50%
Appliances	0%
HVAC	50%


Foundation – what percent damaged?

Superstructure – what percent damaged?





Roof covering – what percent damaged?

Exterior finish – what percent damaged?

Interior finish – what percent damaged?


Doors & windows – what percent damaged?

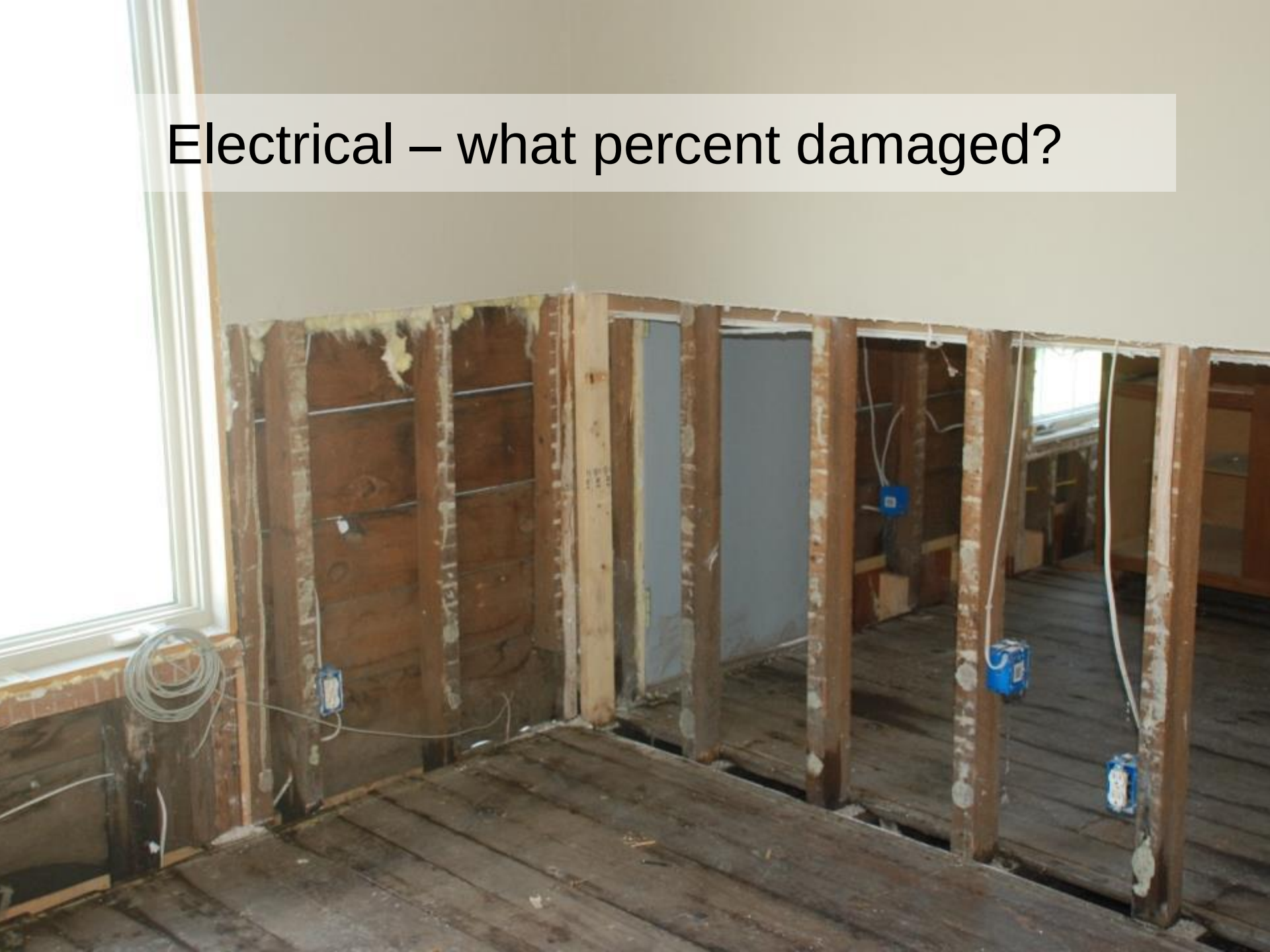
Doors & windows – what percent damaged?


Cabinets & countertops – what percent damaged?
Red Cross
Disaster Services

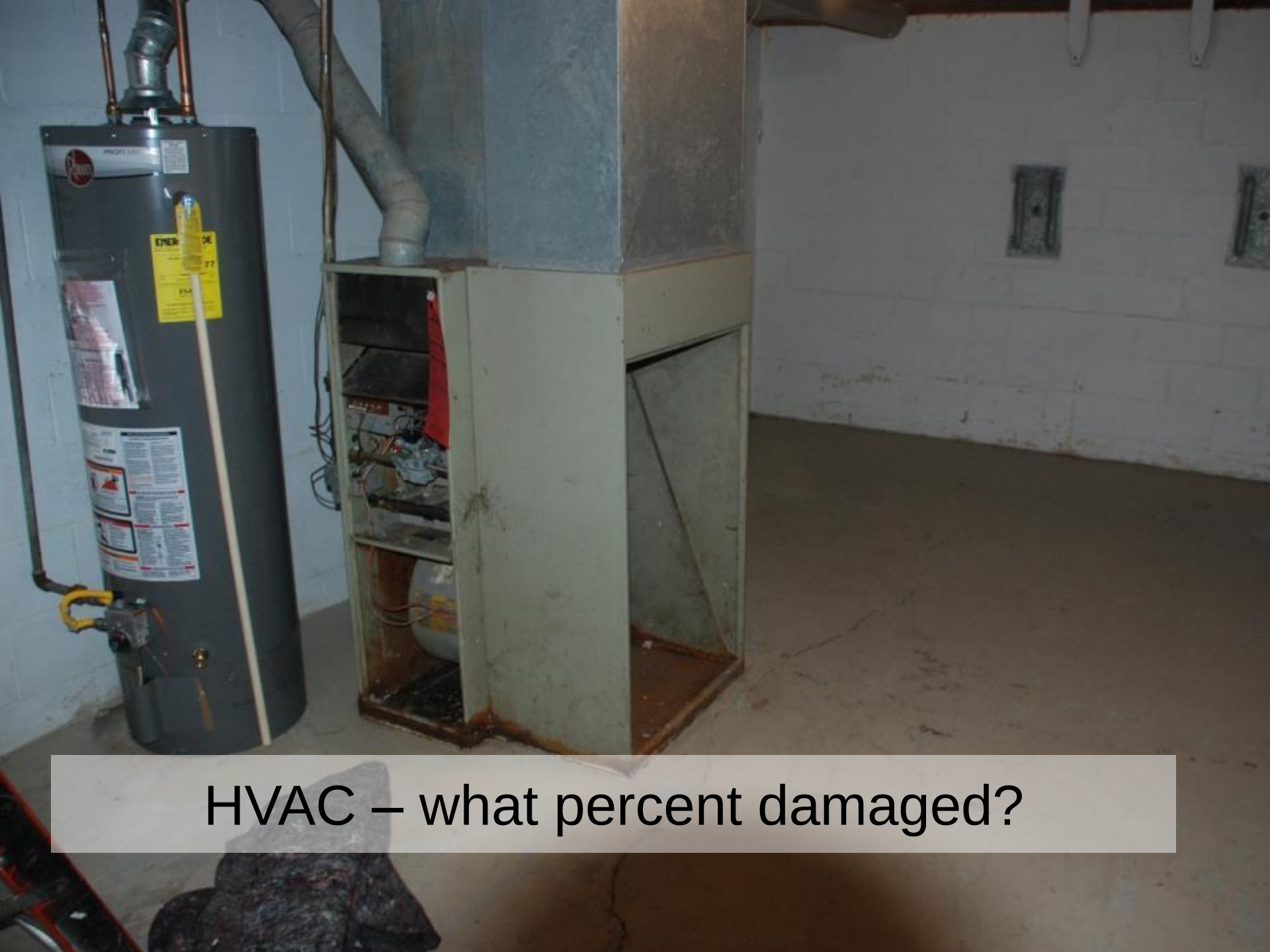

Floor finish – what percent damaged?


Plumbing – what percent damaged?

Electrical – what percent damaged?




Appliances – what percent damaged?


HVAC – what percent damaged?

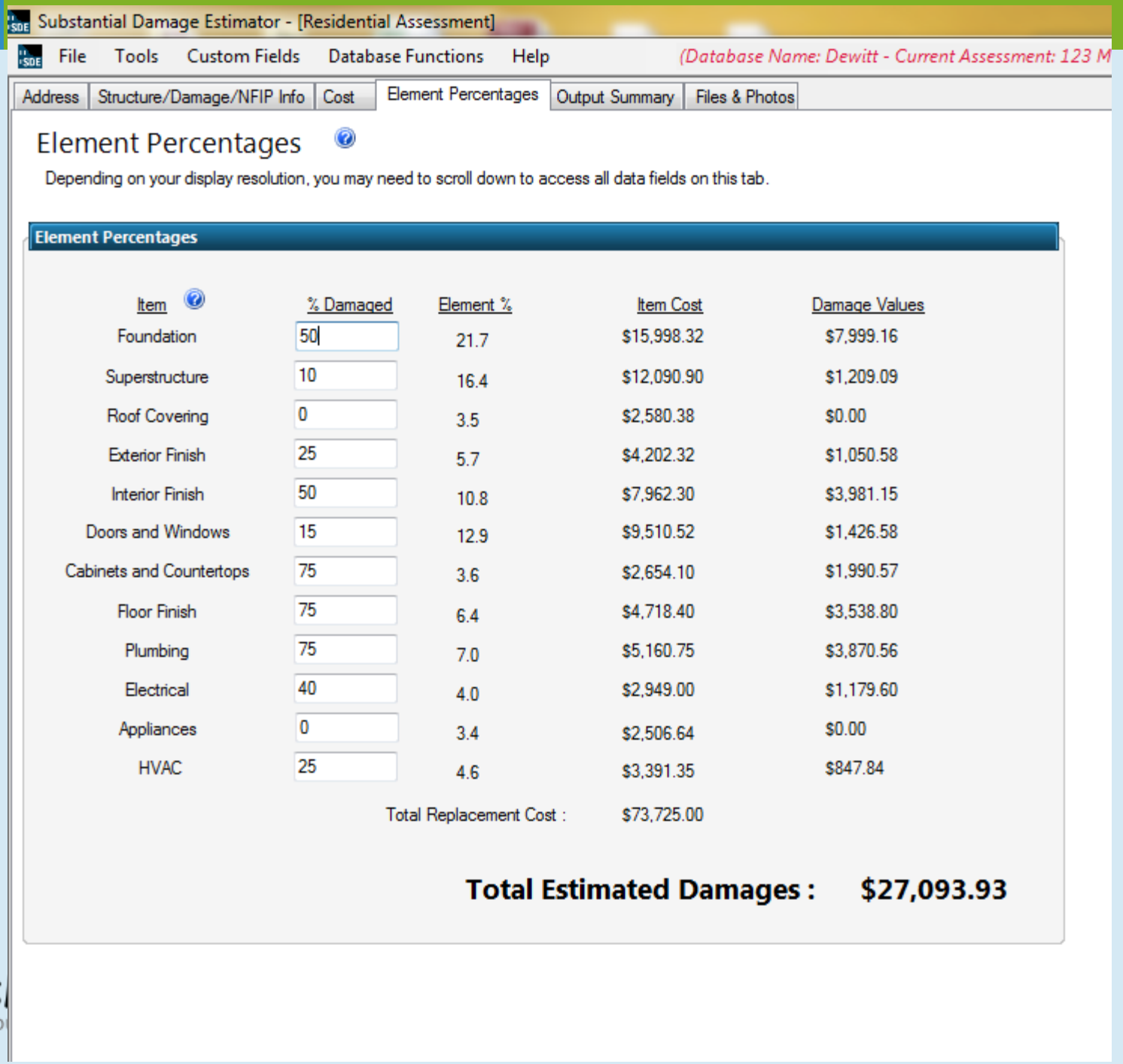
Other building characteristics

- While inspecting a structure, you'll collect other building characteristics like:
  - Type (single family, town house, nonresidential, etc.)
  - Foundation type (basement, continuous wall w/slab, crawlspace, etc.)
  - Superstructure type (stud-framed, common brick, etc.)
  - Roof covering (singles, clay tile, etc.)
  - Exterior finish (siding/stucco, brick veneer, etc.)
  - HVAC system (heating and/or cooling, none)
  - Stories (one story, two or more)
- As well as other building ID, disaster ID, etc. information

SDE Software Tool

- All of these estimates and characteristics will go into the SDE Software Tool to create a profile and substantial damage calculation for each structure

- 1 story
- With basement
- ~1,000 ft^2
- Approximate replacement cost of $73,725



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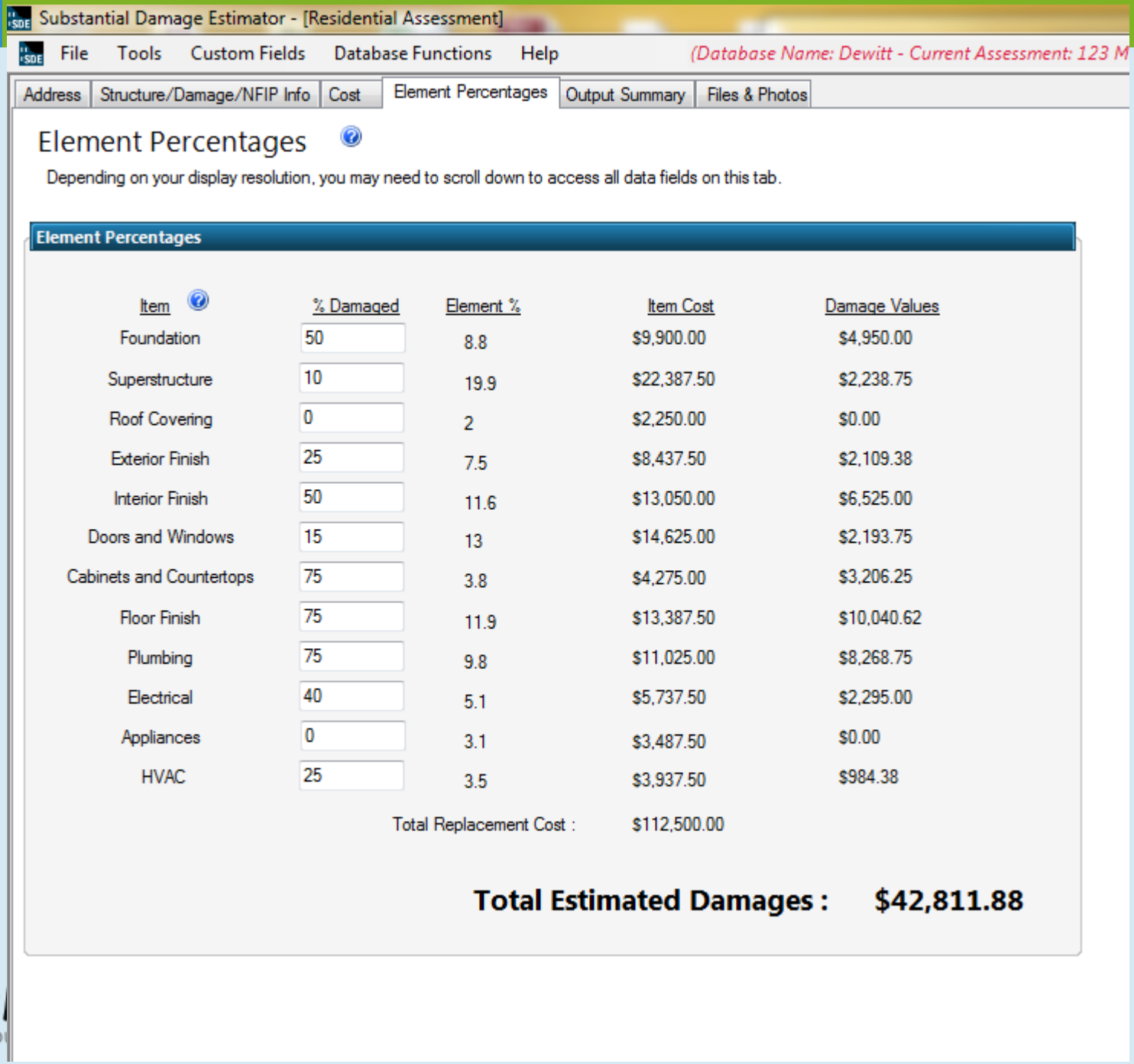
- 2 story
- With basement
- ~1,500 ft^2
- Approximate replacement cost of $112,500



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SDE Software Output

- SDE Software will output a full report with all of the relevant details that you can supply to property owners in letters
- Output is the basis for your conversations with property owners – up to them to provide any additional data
- Keep your documentation of every aspect of substantial damage estimates and associated permits
  - This demonstrates community compliance with the NFIP

What if I can't get in the property or the property owner refuses access?

- While you, the community official, likely have the right to enter any property for substantial damage determinations, there may be hesitant property owners
- You can estimate from outside observations and consider what interior observations have been made on previous inspections
- You can also just have the property owner submit their repair estimates (make sure they have the right costs included) and compare with market value

So what do we look at?

- Costs of repairs of all damage sustained
  - To get to pre-event condition
  - Regardless of what property owner intends to repair
  - Cost of donated labor/supplies must be considered
- 2 situations for costs:
  - When community official goes out to inspect each structure – what elements to include, damage repairs to consider
  - When property owners give you estimates – you need to know what is appropriate to consider in those estimates

What to include in costs?

- Must be included:
  - Materials and labor, including estimated value of donations/discounts and owner labor
  - Site preparation related to improvement/repair
  - Demolition and debris disposal costs
  - Labor and other costs associated with demolishing
  - Costs associated with complying with any other regulations/codes triggered by work (example: ADA)
  - Cost to elevate structure when proposed elevation is lower than BFE
  - Construction management and supervision
  - Contractor's overhead and profit
  - Sales taxes on materials

What may be excluded?

- Clean-up and trash removal
- Costs to temporarily stabilize a building
- Costs to obtain/prepare plans and specs
- Land survey
- Permit/inspection fees
- Carpeting/recarpeting
- Outside improvements like landscaping, sidewalks, irrigation, fences, pools, detached accessory structures, etc.
- Plug-in appliances like washing machines, dryers, stoves

Market value before disaster event

- NFIP does not define market value
- Does say to use only value of structure, not whole property
- Couple ways to determine market value:
  - Assessed value, adjusted to market value
  - Estimates of a structure's actual cash value, including depreciation
  - "Qualified estimates" based on local official's best judgement
- Make sure you are consistent and allow additional information from property owner, i.e. appraisal

Appeals

- You should allow property owners to appeal their determinations if they can provide updated information on:
  - Market value (appraisal)
  - Cost to repair – remember our eligible/ineligible costs
- Ensure fair, standard process for each property owner
- Document, keep records – this is your compliance for NFIP documentation

Substantial Damage Estimates

- From any origin
- 50% rule
- Cost of restoring
- Market value

- Document everything
- Develop written administrative procedures to spell out in letters to property owners – ensure process is fair

Substantial Damage Letter

- Each property visited and every property substantial damaged need to be sent a letter of determination
- Letter should outline administrative process
- Explain permitting and substantial damage piece of ordinance
- Determination (% damage)
- Flood protection information
- Appeal process
- Deadline for appeals
- Contact information

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Substantial Damage Best Practices

- Maintain an inventory of structures in the floodplain and update this every year
  - Use assessor data, keep market values available
  - Partner with emergency manager
- Immediately after disaster, remind your boss(es) that conducting substantial damage is community responsibility
- Visit affected areas and start to make three lists:
  - Not substantially damaged
  - Possibly substantially damaged
  - Definitely substantially damaged
- Take photographs

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Substantial Damage Best Practices

- Notify property owners as soon as possible about permits – inform them that they CANNOT rebuild until permit is obtained and substantial damage determined
- Conduct substantial damage estimates soon after the disaster event
- Write down administrative procedure so everyone knows the process is fair
- People will be angry about having to comply with “new” regulations if declared substantially damaged, know the process, understand how to explain it to them
- Keep all documentation

Would I want to be declared substantially damaged?

- Benefits of substantial damage:
  - Ensures that if building damaged by flood (or other source), then it will be much safer during the next flood
  - Regulations will reduce community risk overall
  - Property owner can tap into Increased Cost of Compliance

Increased Cost of Compliance

- Part of every NFIP policy
- Can cover up to $30,000 to elevate building or move properties
- Requires letter of substantial damage
- Damage must be from flooding
- Community should be a part of helping property owners know that ICC exists and can be used after a flood event

Kansas ICC Project - before

House being elevated

ICC project complete

Violations

- Any violation of your floodplain management ordinance puts the community's participation in the NFIP in jeopardy!
- Violations are any development that doesn't meet the minimum standards of your ordinance
- Post-flood times ripe for violations

What is a violation?

- Any post-FIRM residential property with the lowest floor below BFE
- Manufactured home that is not anchored
- Improper use of enclosure below BFE
- Nonresidential not floodproofed below BFE

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Violations

- Sometimes do not get a permit – intentionally or accidentally
  - Make sure you/your staff constantly drive in the affected areas to catch any rebuilding
- Violations make flood insurance expensive for that building
- Need to address problem quickly

Problems for property owner

- Increased flood risk
- High rates of insurance
- Difficult to sell property
- Possible legal action

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Problems for community

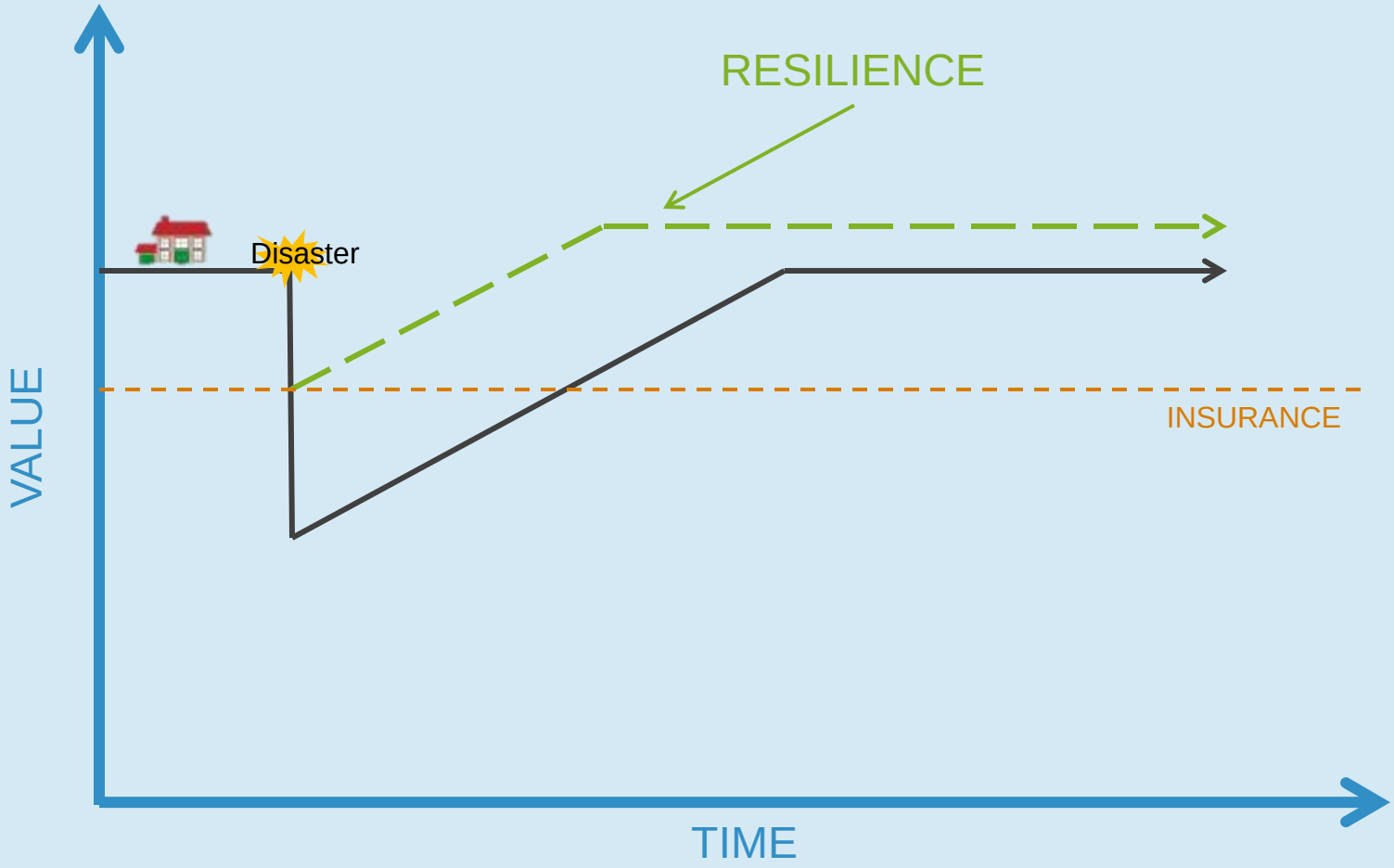
- Increased flood risk – risk for rescue personnel
- Probation from NFIP - $50 surcharge
- Suspension from NFIP– unavailability of flood insurance
- Suspension from CRS
- Possible legal action

Can I just grant a variance?

- Very limited contexts where variances can be granted:
  - Accessory structures
  - Historic buildings
- Financial hardship, inconvenience, other hardships are not valid reasons for variances
- Variance doesn't change flood insurance rates – can be extremely high

Historic structures

What is a “resilient recovery?”



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Pre-Disaster Preparation

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How do I prepare for post-disaster responsibilities?

- Building inventory
- Public awareness
- Mitigation alternatives
- Critical facilities
- Higher regulatory standards

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Building Inventory

Building Inventory

- Key data to have:
  - Basic: owner, address, etc.
  - Square footage
  - Year built
  - Market value – via assessor or other
  - Flood zone – and BFE if possible
  - Other relevant information from assessor

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Public Awareness

- Work to constantly get the word out about flood hazards
- Brochures (free from FEMA), mailings, bill stuffers, billboards, etc.
- Focus on important messages:
  - What are local flooding concerns
  - Buy flood insurance
  - Keeping your family safe during flooding
  - Protect your property from flooding
  - Get permit
  - Know mitigation options

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Mitigation Options

- Benefits
  - Reduce flood risk
  - Reduce cost of flood insurance
  - Reduce loss to property
  - Keep community strong
- Constantly get this message across


Elevation

Buyouts/Relocation

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Critical Facilities

- Every floodplain administrator should know where the critical facilities in the floodplain are
- Communities should actively seek to not have critical facilities at risk from flooding
  - Fire stations
  - Hospitals
  - City hall
  - Nursing homes
  - Schools
- Nebraska newspaper from May 2015: “Disaster plans rushed away with the floodwater. No amount of planning could prepare the Deshler nursing home for a mass evacuation.”
  - Not true!

Higher Regulatory Standards

- Increased freeboard
- Prohibit all development in floodway
- Critical facility protection regulations
- Local drainage protection
- Cumulative substantial improvements
  - Or lower substantial improvements

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50% Rule

$$\frac{\text{Cost to repair damage}}{\text{Market value}} \geq 50\%$$

EXAMPLE: A home is worth $110,000 before the flood and will cost $70,000 to bring to pre-damage condition.

$70,000 / $110,000 = 0.64 Multiple by 100, equals 64%

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50% Cumulative Rule

$$\frac{\text{Cost to repair damage}}{\text{Market value}} \geq 50\%$$

Flood 1: A home is worth $110,000 before the flood and will cost $20,000 to bring to pre-damage condition.

$20,000 / $110,000 = 18%

Flood 2: It will cost $30,000 to bring to pre-damage condition.

$30,000 / $110,000 = 27%

Flood 3: It will cost another $20,000 to bring to pre-damage condition.

$20,000 / $110,000 = 18%

18% + 27% + 18% = 63% **Substantially damaged**

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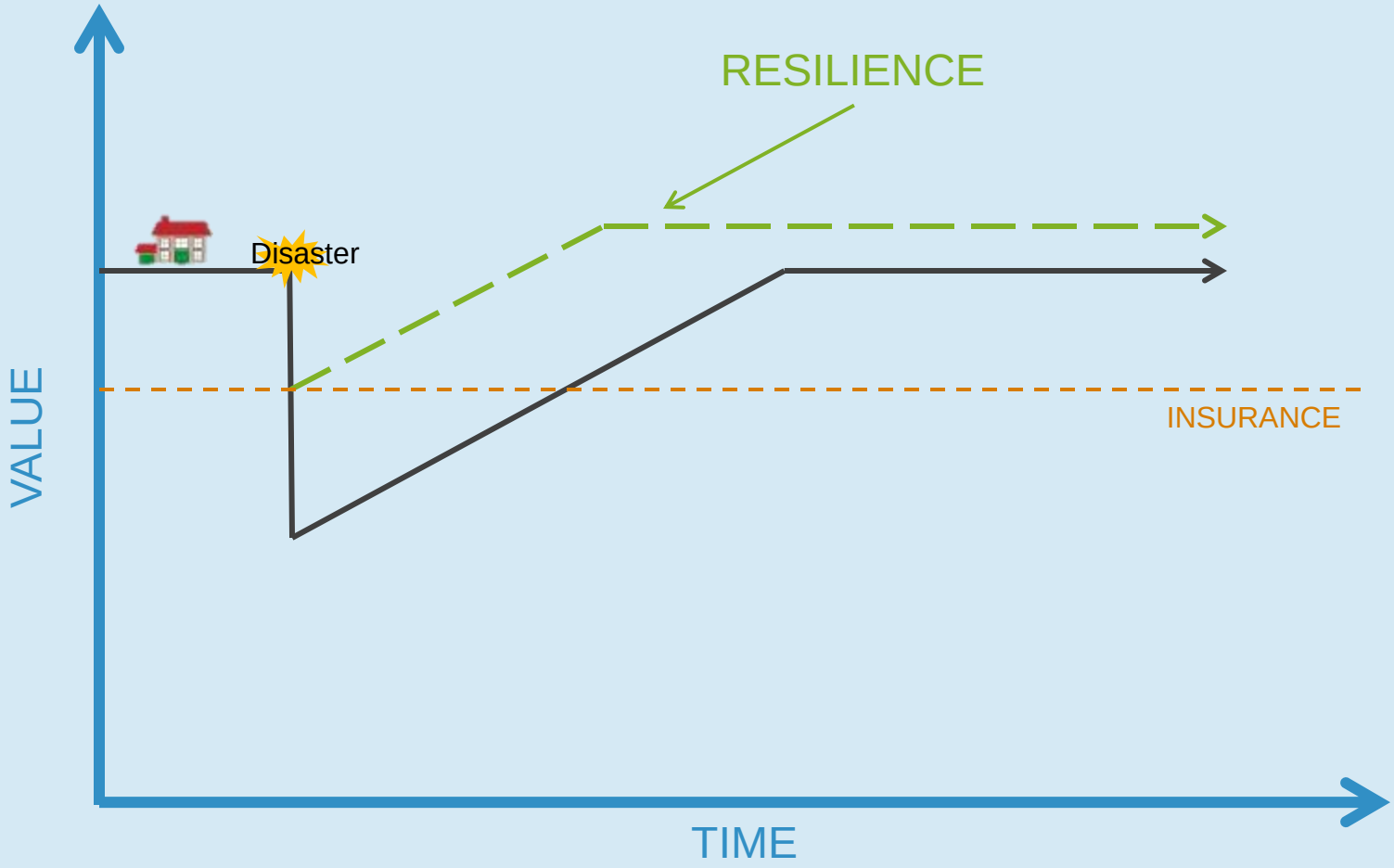
What is a “resilient recovery?”



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Post-Disaster Planning

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What else can I do to promote resilience after a disaster?

- Encourage mitigation
  - ICC & other funding sources can help
- Outreach
- Resilience planning
- Land use planning

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Encourage Mitigation Efforts

- Best time to capture people's attention
- More understanding of risk, safety
- Reduce future flood insurance premiums – avoid becoming repetitive loss/severe repetitive loss properties

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Encourage Mitigation Efforts

- Host forum
- Actively seek grants
  - NEMA
  - NDNR
  - ICC
- Buyouts
- Safe rooms

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Continued Outreach

- People will care a lot about flooding after a flood
- Likely to be lots of confusion, misinformation
- Help residents/business owners understand flood insurance, mitigation
- Keep similar messages
- Bring “experts” in
- Use free FEMA publications

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Increase Resilience

- Integrate flood risk reduction into other community rebuilding
- Local economy likely affected by businesses flooded
  - How do you help businesses recover and become more flood resilient
- Buyouts good time to talk about new parks, open space areas
- Partner with other government agencies:
  - Local
  - State
  - Federal

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Update Comprehensive Plan

- After a disaster, your community may change significantly
- Good opportunity to think long-term and think about land use planning in floodplains
- Demographics may have changed
- May already be doing a long-term recovery plan

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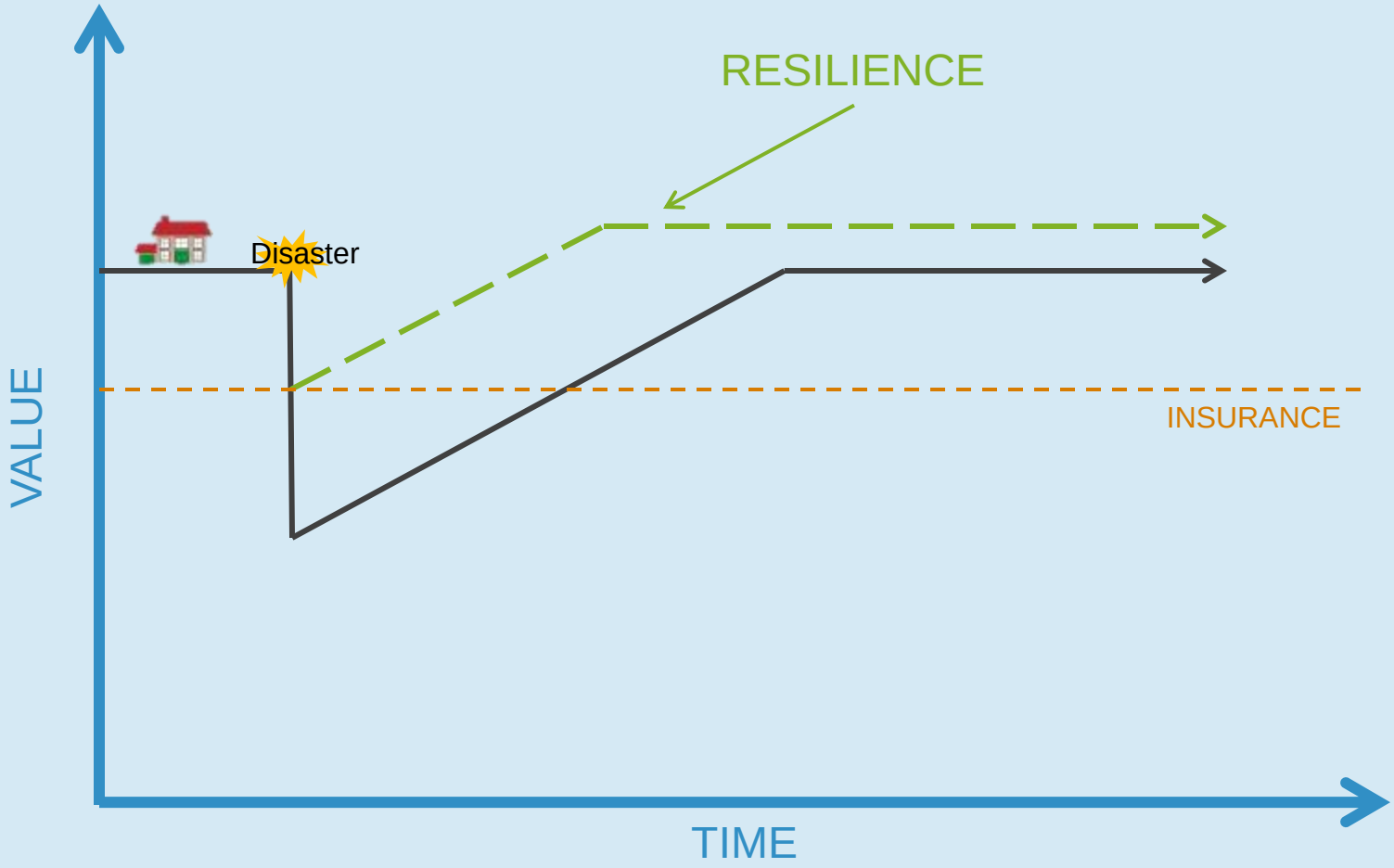

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Thank you!

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